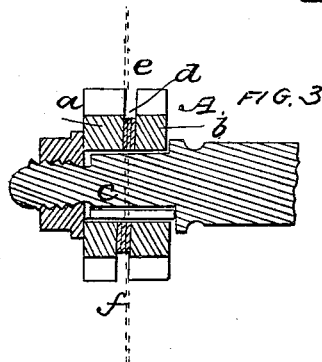
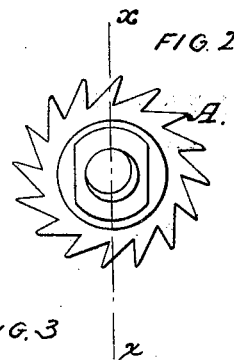
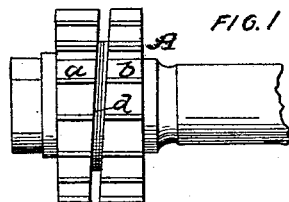


J. T. SMITH.

Milling Tool.

No. 53,496.

Patented March 27, 1866.



Witnesses

Wm. E. Lyons
Geo. B. Covington

Inventor

John T. Smith
Munn & Co
attys

UNITED STATES PATENT OFFICE.

JOHN T. SMITH, OF MIDDLETOWN, CONNECTICUT.

IMPROVEMENT IN MILLING-TOOLS.

Specification forming part of Letters Patent No. 53,496, dated March 27, 1866.

To all whom it may concern:

Be it known that I, JOHN T. SMITH, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new and Improved Milling-Tool; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of this invention. Fig. 2 is a front elevation of the same. Fig. 3 is a longitudinal vertical section of the same, taken in the plane indicated by the line *x x*, Fig. 2.

Similar letters of reference indicate like parts.

This invention relates to an improvement in cutters or tools for milling iron, steel, brass, or any other metal, and also wood, ivory, and other materials; and the invention consists in constructing the cutter out of two parts, which when put together, are separated from each other by an oblique plane in such a manner that when the tool wears off, or whenever it may be desirable, it can be adjusted by interposing between the two parts disks of paper or sheet metal, and a cutter is obtained which can be used for milling slots or grooves of different width, or which can be used for a long time in milling slots or grooves of a uniform width.

A represents my cutter, which is composed of two parts, *a b*. These two parts are of an irregular shape, as clearly shown in Figs. 1 and 3, so that a cross-section thereof forms a trapezoid, as shown particularly in Fig. 3, and that when the two parts are placed close together the plane separating the same passes

through an oblique angle toward the axis of the spindle on which the cutter is mounted. A pin or key, *c*, passing through suitable holes in both parts of the cutter, serves to keep the same in the proper position toward each other, and when said two parts are placed close together they form a cutter, which can be used in the ordinary manner.

The advantage of my cutter is that the same can be adjusted by interposing between the two parts disks *d*, of paper or sheet metal, as clearly shown in Figs. 1 and 3 of the drawings, and the thickness or width of the cutter can thus be increased until a line drawn through the point *e* of the part *a* in a direction at right angles to the spindle coincides nearly with a similar line drawn through the point *f* of the part *b*. (See Fig. 3.)

It must be understood that it is not necessary to make the inner faces of the two parts *a b* of the cutter plane. They might be curved or corrugated or made in any suitable manner, though it is obvious that the same are easiest made with plane faces; and furthermore when the faces are plane the cutter can be more readily adjusted, and I use therefore, by preference, plane faces, such as shown in the drawings.

What I claim as new, and desire to secure by Letters Patent, is—

A cutter or milling-tool made in two parts of irregular shape, substantially such as herein described, so that by interposing disks of paper or other suitable material the cutting-face of the tool can be adjusted for slots or grooves of different width.

JOHN T. SMITH.

Witnesses:

MARSHALL D. ANDRUS,
C. D. FITCH.